

Appl. No. 10/699,270

Reply to Advisory action of March 21, 2006

Docket. No.: 40116/03801(022.0143)

REMARKS

I. INTRODUCTION

Claims 1, 9 and 16 are amended by the present amendment. No new matter has been added. Thus, claims 1-21 remain pending in the present application.

A Request for Continued Examination is being filed herewith, and entry of the present amendment is respectfully requested. The present amendment corresponds to the un-entered amendment previously filed February 21, 2006, and addresses the Advisory Action dated March 21, 2006.

In view of the above amendments and the following remarks, it is respectfully submitted that all of the pending claims are allowable.

II. SUPPORT FOR AMENDMENTS

Claim 1, 9 and 16 have been amended to recite that the first device transmitting the payload data can do so "without sensing for communication activity on the first band prior to transmission." It is respectfully submitted that this element is supported by the disclosure pursuant to the written description requirement under 35 U.S.C. §112, first paragraph.

Paragraph 18 of the disclosure states:

Because the MUs may not send data broadcasts over the HF band (may not use the channels located in the HF band), there is no need for the AP 10 to use a system such as an RTS/CTS mechanism to reserve exclusive use of such channel. Therefore, additional data transmissions associated with RTS and CTS messages are unnecessary.

Paragraph 22 of the disclosure states:

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Since the payload data is addressed to the MU 12 and it is sent over the HF band, the destination MU 20 is the only MU in the wireless network 1 which receives this uni-directional transmission; the other MUs 21-22 may be "unaware" that the payload data is being sent to MU 20 on the HF band. Since the non-destination MUs 21-22 may not be using the HF band, there is no risk that there will be a collision on this HF band with the payload data.

At least these two passages of the disclosure suggest and necessarily imply that the first device can transmit the payload data without sensing for communication activity on the first band prior to transmission. If the MUs may not send data broadcasts over the HF band, there is no need to sense for communication activity. Similarly, if there is no risk of collision on the HF band, there is no reason to sense for communication activity. As required by the written description requirement and MPEP 2163.01, the application conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, the inventor was in possession of the presently claimed subject matter. Moreover, as noted in MPEP 2163.07(a), an inherent advantage, function or theory of an invention is not new matter.

III. THE U.S.C. §103(a) REJECTIONS SHOULD BE WITHDRAWN

Claims 1-21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0013128 to Moreton et al. (hereinafter "Moreton"), in view of U.S. Patent Application Publication No. 2003/0048770 to Proctor (hereinafter "Proctor"), and in further view of U.S. Patent No. 6,853,348 to Jung et al. (hereinafter "Jung").
11/16/05 Office Action, pages 2-7.

Moreton discloses a Wireless Local Area Network ("WLAN") access point ("AP") and a method to control the AP to allow multiple clients that utilize different wireless standards to transmit and receive data. *Moreton*, Abstract. Moreton teaches an AP and a method where two different wireless standards can be supported simultaneously, giving the appearance of there being only one network. *Moreton*, ¶ [0015]. Although Moreton discloses an access point and a method that utilizes two different frequency bands in implementing a WLAN, Moreton still requires the either the channel to be reserved prior to transmission or for the AP to sense the

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channel to determine if it is clear. "[A]ccess to channel is controlled using a mechanism called carrier sense multiple access with collision avoidance (CSMA/CA)." *Moreton*, ¶ [0072.] CSMA/CA is a distributed mechanism specifically referred to within 802.11 as a distributed coordination function ("DCF") that listens to ensure that no other station is transmitting, and if it recognizes that the channel is being used, applies a random time during which to "back-off" until checking the channel again. *Moreton*, ¶¶[0072]-[0075]. A further mechanism that may be incorporated is a request to send ("RTS") and clear to send ("CTS") frames in trying to avoid collisions ("RTS/CTS"). *Moreton* builds on RTS/CTS procedure by adding data to the RTS and CTS frames that inform the receiving station, transmitting station, and other stations on the network, the time period during which the channel has been reserved so that other clients on the network would not attempt to transmit data. *Moreton*, ¶ [0084].

Independent claim 1 recites, "transmitting payload data *exclusively* on the first band *without having to reserve the first band prior to transmission and without sensing for communication activity on the first band prior to transmission.*" (Emphasis added). The Examiner correctly points out that the "DCF consists of a basic mode as well as the optional RTS/CTS access mode Basic access mode comprises a node sensing the channel to determine whether another node is transmitting before initiating a transmission," and also that the "method of *Moreton* can use the basic mode or the optional RTS/CTS access mode." *11/16/05 Office Action*, page2. Thus, the system of *Moreton* either requires the reservation of a channel (RTS/CTS mode) or the sensing of the channel to determine if it is busy (basic mode). The present invention eliminates the need to reserve a channel and sense the channel. Thus, the present invention eliminated the possibility of even encountering a "back-off" time (delay) that is possible in basic mode under *Moreton*. Accordingly, *Moreton* neither teaches nor suggests transmitting payload data on a first band "*without having to reserve the first band prior to transmission and without sensing for communication activity on the first band prior to transmission.*"

Neither Proctor nor Jung cure this deficiency of *Moreton*. Proctor discloses a technique for using directional antennas in wireless data transmission systems. *Proctor*, Abstract. The purpose of Proctor is to utilize a directional antenna array to improve the signal integrity to

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those clients in the network. *Proctor*, ¶ [0007]. Although Proctor is dealing with wireless networks, it embraces the RTS/CTS mechanism. (See *Proctor*, ¶¶ [0014]-[0018]). Thus, the method in Proctor does not eliminate the need for preliminary broadcasts used to reserve a channel, such as the RTS/CTS mechanism, but incorporated such a mechanism into its design.

Jung discloses the design of a dual band linear antenna array. *Jung*, Abstract. There is no mention in Jung regarding any wireless network or WLAN. Jung merely deals with the hardware design of a specific antenna array.

Accordingly, neither Moreton, Proctor, nor Jung alone or in combination, suggests or teaches a method that comprises "transmitting payload data *exclusively* on the first band *without having to reserve the first band prior to transmission and without sensing for communication activity on the first band prior to transmission.*" As recited in independent claim 1. Thus, it is respectfully submitted that the 35 U.S.C. 103(a) rejection of claim 1, and the claims depending therefrom (claims 2-8) should be withdrawn.

Similar to claim 1, claim 9 recites a method comprising "the first device transmitting the payload data without having to reserve the first band and without sensing for communication activity on the first band prior to transmission." Therefore, for at least the reasons discussed with respect to claim 1, it is respectfully submitted that the 35 U.S.C. 103(a) rejection of claim 9, and the claims depending therefrom (claims 10-15) should be withdrawn.

Similar to claim 1, claim 16 recites a device comprising "wherein payload data is unidirectionally transmitted using the smart antenna on the first band without having to reserve the first band prior to the transmission of the payload data and without sensing for communication activity on the first band prior to transmission." Therefore, for at least the reasons discussed with respect to claim 1, it is respectfully submitted that the 35 U.S.C. 103(a) rejection of claim 16, and the claims depending therefrom (claims 10-15) should be withdrawn.

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CONCLUSION

In view of the remarks submitted above, Applicant respectfully submits that the present case is in condition for allowance. All issues raised by the Examiner have been addressed, and a favorable action on the merits is thus earnestly requested.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

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